

We claim:

1. A process for preparing polyoxyalkylene glycols of a certain molecular weight in one stage by copolymerizing tetrahydrofuran and alpha,omega-diols as the comonomer in the presence of a heteropolyacid and of a hydrocarbon, by distilling off a mixture of water and this hydrocarbon from the copolymerization, which comprises terminating the polymerization when this molecular weight is attained by adding water, comonomer, butanediol or butanediol-water mixtures.
- 10 2. A process as claimed in claim 1, wherein between 0.1 and 10% by weight of water, comonomer, butanediol or butanediol-water mixture, based on the total amount of tetrahydrofuran, comonomer and heteropolyacid already used for the copolymerization, is added.
- 15 3. A process as claimed in either of claims 1 or 2, wherein the attainment of the molecular weight is determined by measuring the electrical conductivity of the copolymerization mixture.
4. A process as claimed in any of claims 1 to 3, wherein the water, comonomer, butanediol or butanediol-water is added at a conductivity of from 0.1 to 5  $\mu$ S.
- 20 5. A process as claimed in any of claims 1 to 4, wherein the alpha,omega-diol used is neopentyl glycol.

We claim:

1. A process for preparing polyoxyalkylene glycols of a molecular weight of from 1000 to 2800 in one stage by copolymerizing tetrahydrofuran and alpha,omega-diols with the exception of butanediol as the comonomer in the presence of a heteropolyacid and of a hydrocarbon, by distilling off a mixture of water and this hydrocarbon from the copolymerization, which comprises terminating the polymerization when this molecular weight is attained by adding water.
- 10 2. A process as claimed in claim 1, wherein between 0.1 and 10% by weight of water, based on the total amount of tetrahydrofuran, comonomer and heteropolyacid already used for the copolymerization, is added.
- 15 3. A process as claimed in either of claims 1 or 2, wherein the attainment of the molecular weight is determined by measuring the electrical conductivity of the copolymerization mixture.
- 20 4. A process as claimed in any of claims 1 to 3, wherein the water is added at a conductivity of from 0.1 to 5  $\mu$ S.
5. A process as claimed in any of claims 1 to 4, wherein the alpha,omega-diol used is neopentyl glycol.